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(54) Title: HIGH TEMPERATURE CEMENTS

(57) Abstract: A method of designing a cement composition comprises determination of the temperature to which the composition will be exposed in situ; determination of a stable, thermodynamic equilibrium composition of a CaO-Al_2O_3-SiO_2-H_2O (CASH) mineral system in the [xonotlite/wollastonite]-grossularite-anorthite or grossularite-anorthite-quartz triangles of the Si-Ca-Al phase diagram with a possible contribution of iron and/or magnesium, analogous to the cement when set, at the determined temperature; determining proportions of cement and mineral oxides required to provide a mixture having the determined composition; and defining a series of particulate materials of predetermined particle sizes and densities, comprising cement and mineral oxides in the determined proportions.

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